

z/OS Platform Installation Strategy

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What does “Installation” Mean?

- Everyone seems to “know what it means,” but when asked, they might say:
 - Load the product code into data sets and file systems
 - Load the product code and get the address spaces started
 - Load the product code, get the address spaces started, and run the IVPs (if supplied)
 - ...and so on
- John’s definition:

Installation means the entire set of tasks you need to do, starting with when you get your product order from the vendor and ending when the products are ready to use in a production environment.

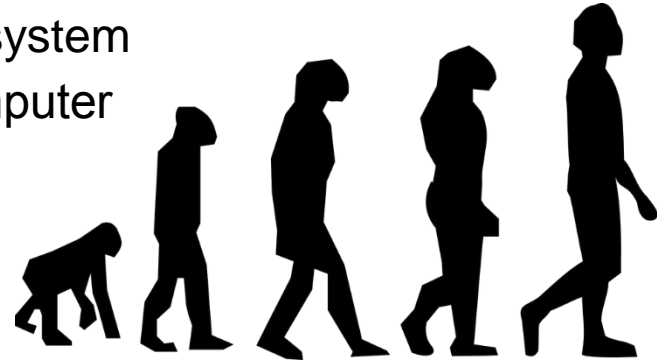


Yet Another Brief History of Time

(With abject apologies, again, to Stephen Hawking)

In the Beginning...

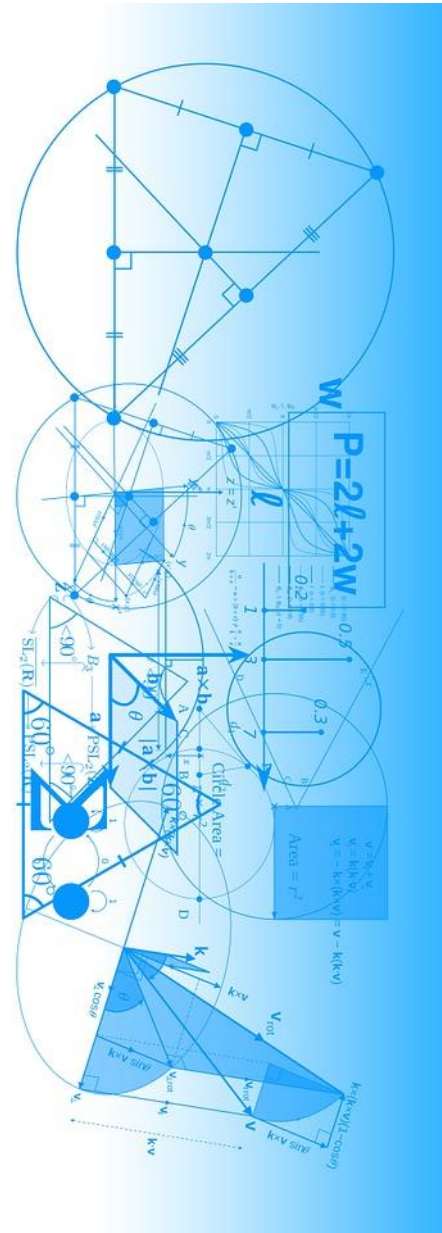
- Every group at IBM “did their own thing”
 - There were no installation standards
 - Products from different IBM development labs had different installation procedures, instructions, and service methods
 - You had to get things from different labs to build a system
 - Everybody assumed the “catcher” was another computer scientist, who would “just know what to do”
- **Eventually, we ran out of excuses...**
- So, circa the 1970’s:
 - SMP (now SMP/E) was adapted from OS/360’s OSMP
 - MVS Packaging Rules and recommendations were created
 - The Program Information Division (“PID,” today called “STS”) was created
 - Everyone in IBM had to play if they had a product to deliver



All this was a huge improvement at the time!

After That...

- Systems installation was still quite complicated
 - RECEIVE; (perhaps APPLY); ACCEPT products; perhaps SYSGEN, SMP/E copies, JCLIN, then put on PTFs
 - Sometimes, it all even worked!
 - Everybody assumed the “catcher” was a system programmer who would “just know what to do”
- **Eventually, we ran out of excuses...**
- IBM Sales (yes, Sales!) took things into their own hands; **IPO** was born
 - IPO and its successor **CBIPO** delivered “preinstalled” (for some, “ready-to-sysgen”) products and a way to lay them down far more quickly with a single installation process
 - Products in an order were aggregated into one package
 - PTFs were integrated
 - Created as system replacement offerings, they were designed to require that a “base product” (MVS, CICS, DB2, IMS or NCP) always be in the package
 - That restriction remained when **ServerPac** replaced CBIPO



Then...

- “Easier” was still not “easy”
 - We still had a complex product structure
 - We still had myriad combinatorial test challenges
 - Our customers (that’s you!) had to manage all this
 - You had to generate target libraries from shipped DLIBs even with CBIPO
 - We still assumed system programmers were there to catch what we threw
- **Eventually, we ran out of excuses (sound familiar?)...**
- **ServerPac** came out with OS/390 V1.1
 - ServerPac shipped target libraries too, but...
 - ...it was otherwise similar to CBIPO in many respects
 - It had (ahem) “some” problems when introduced
 - We went to work on it...quality, automatic data set volume assignment, view and change by attribute, Internet-based delivery, ...
 - We finally removed the “base product” restriction for most products, with **Product ServerPac**, starting in 2013 (z/OS) and 2015 (subsystems)





Where We Are Today

Today's Standard IBM Installation Methods

ServerPac

- Much better than CBIPO was, overall, now (at least in my view)
- “Preinstalled” products (most or all SMP/E work is done at IBM)
- Product aggregation—you can get more than one product at a time
- Service integration to the IBM-recommended level; fewer PTFs to install
- Flexible if clunky ISPF-based installation dialog that:
 - Offers a number of configuration choices
 - Creates batch jobs based on the choices, including some post-SMP/E setup and customization steps
 - Remembers what you did so you can model new packages after older ones

```
CPPPFLOW ----- Installation Options for Order ( MD053718 ) -----  
OPTION ==>
```

Complete these options to install the order:

C	Create	Create the Work Configuration
*	Variables	Specify Values for Variables
*	Zones	Specify SMP/LIB and SMP/E Zone Names Information
*	Modify	Modify the System Layout
*	Alias	Specify Catalogs for High-Level Qualifiers
*	SSA	Specify Temporary Aliases (SSAs) for Catalogs
*	Installation	Create and Submit Installation Jobs (Option not available until download complete)

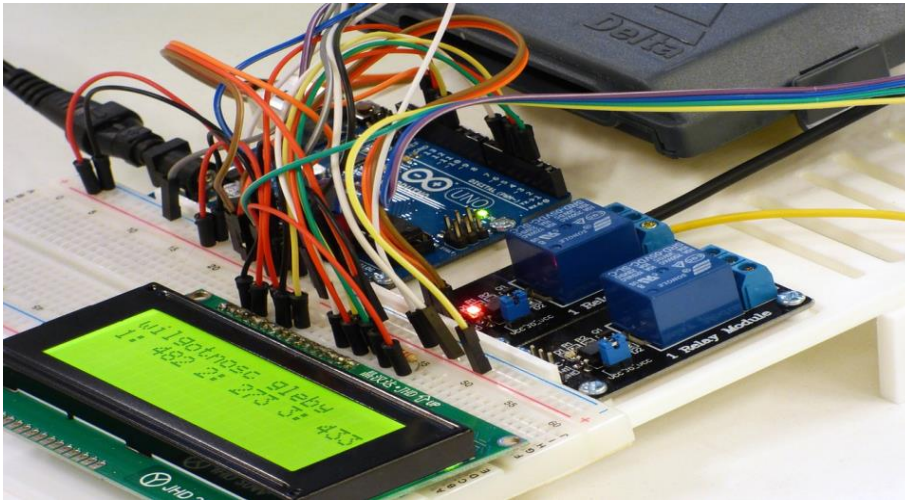
You can use Save any time after creating the work configuration:

*	Save	Save the Current Work Configuration
---	------	-------------------------------------

Today's Standard IBM Installation Methods

CBPDO

- **The hard way!** “A kit, not assembled”
 - Read program directories
 - Run SMP/E RECEIVE, APPLY, & ACCEPT for each product you install
 - Do it again for service
 - Post-SMP/E steps must be done from documentation and samples



IBM

Program Directory

For CBPDO Installation and ServerPac Reference

z/OS

V2.2.0

Program Number 5650-ZOS

CBPDO Level SMC1510

Service Level 1502

Document Date: September 2015

GI11-9848-01

But, “Easier” is Still Not “Easy”

- As anyone can see on Shopz...
 - IBM offers a number of package selections to be considered before you can choose a product:
 - **Three** options in most places:
 - ServerPac
 - CBPDO
 - Standalone products
 - **Up to six** options in parts of Europe
 - Those above, plus:
 - SystemPac
 - FunctionPac
 - ProductPac



Shopz > Product catalog >

Product catalog

Catalog view (Products in this view: 0)

Country/Region

Switzerland

Package type

Select one

Select one

KVM for IBM z - Standalone products and fixes

Linux on z - Standalone products and fixes

z/OS - CBPDO (products)

z/OS - ServerPac (system, subsystem, or products)

z/OS - ProductPac (customized products)

z/OS - FunctionPac (customized function replacement)

z/OS - SystemPac (customized system replacement)

z/OS - Standalone products and fixes

z/VM - VM SDO version 6

z/VM - Standalone products and fixes

z/VSE - VSE SIPO version 5

z/VSE - VSE SIPO version 6

➤ **This is part of the problem...**

That “Other Package,” the Standalone Path

- The Standalone Path is IBM’s original product offering
 - Insensitive to:
 - Content
 - Standardization in any form
 - It makes and delivers copies; no more
 - Some are SMP/E installable using standard processes but have not been integrated in a standard offering
 - Some are SMP/E installable but do not fit into our manufacturing processes for one reason or another
 - Some are not SMP/E installable
 - This is where the majority of products we add via acquisition go until they are “bluwashed” and can be integrated into ServerPac and CBPDO



We are running out of excuses again...



What We Have Heard From Customers

Customer Feedback

- We have heard that product license management is too hard with traditional IBM ServerPac delivery
 - We need to do multiple system builds, and system builds take time
 - Each build needs a separate maintenance stream
 - We need to track where things go so we know where they are
- We have heard many are bringing a lot of new people on board, who don't have the deep installation skills experienced people have
- We have heard that some others have simplified their installation processes; can't IBM follow suit?
- Whatever you choose to do, make sure the other software vendors are on board...



Where We Want to Be*

(We'll fill in the blanks later)

* All statements regarding IBM future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

What I Want to See in Shopz*

- We need to get to a single method of product delivery, and then tune it as necessary
- No “packages” to select for z/OS products
- Just pick the products you want
- A package is created with those products in it
- You can select products in:
 - SMP/E format
 - Non-SMP/E format
 - A mix of SMP/E and non-SMP/E formats



Product catalog

Catalog view (Products in this view: 0)

Country/Region

Package type

- Select one
- Linux on z - Standalone products and fixes
- z/OS Products
- z/VM - VM SDO version 6
- z/VM - Standalone products and fixes
- z/VSE - VSE SIPO version 5
- z/VSE - VSE SIPO version 6

Fast acc

IBM Customers



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What I Want to see in z/OSMF*

- In z/OSMF Software Management:
 - Add portable remote software instance and download it
 - Use the “Deployments” function to install it
 - Deployments drive workflows for system and product setup tasks

Welcome x

Software Manage... x

Software Management

Use this task to view details about your software inventory, including related products, features, FMIDs, data sets, deployments, and SYSMODs. [Learn more...](#)

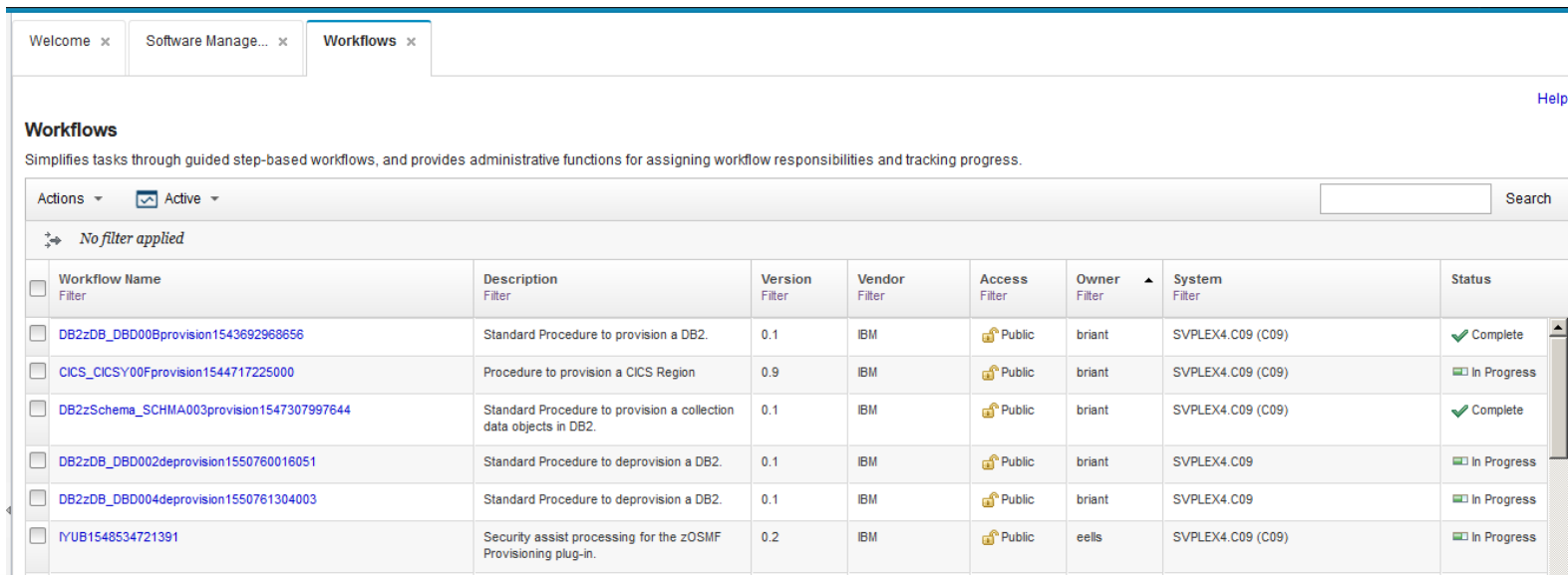
Software Instances	Define your software to z/OSMF; deploy software; generate reports about your software.
Portable Software Instances	Define your portable software instances to z/OSMF.
Products	View a consolidated list of the products included in each software instance.
Deployments	Deploy a software instance, and manage existing deployments.
Categories	Create new categories for your software instances and deployments, and manage existing categories.
Settings	Select the time zone in which to display date and time data. Indicate whether to display or suppress information messages.



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What I Want to see in z/OSMF*

- In Software Management (continued):
- The workflows can be re-driven for every Deployment operation, local or remote, so:
 - They are automatically re-tailored for every environment
 - No need to bring forward and edit ServerPac-supplied setup jobs for this and for that
 - No need to keep a checklist for the things the workflows do



The screenshot shows the 'Workflows' section of the z/OSMF interface. It includes a search bar and a table of workflow tasks. The table has the following columns: Workflow Name, Description, Version, Vendor, Access, Owner, System, and Status. The status column shows 'Complete' (green checkmark) or 'In Progress' (green progress bar).

Workflow Name	Description	Version	Vendor	Access	Owner	System	Status
DB2zDB_DBD00Bprovision1543692968656	Standard Procedure to provision a DB2.	0.1	IBM	Public	briant	SVPLEX4.C09 (C09)	Complete
CICS_CICSY00Fprovision1544717225000	Procedure to provision a CICS Region	0.9	IBM	Public	briant	SVPLEX4.C09 (C09)	In Progress
DB2zSchema_SCHEMA003provision1547307997644	Standard Procedure to provision a collection data objects in DB2.	0.1	IBM	Public	briant	SVPLEX4.C09 (C09)	Complete
DB2zDB_DBD002deprovision1550760016051	Standard Procedure to deprovision a DB2.	0.1	IBM	Public	briant	SVPLEX4.C09	In Progress
DB2zDB_DBD004deprovision1550761304003	Standard Procedure to deprovision a DB2.	0.1	IBM	Public	briant	SVPLEX4.C09	In Progress
IYUB1548534721391	Security assist processing for the zOSMF Provisioning plug-in.	0.2	IBM	Public	eells	SVPLEX4.C09 (C09)	In Progress



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Getting from Point A to Point B*



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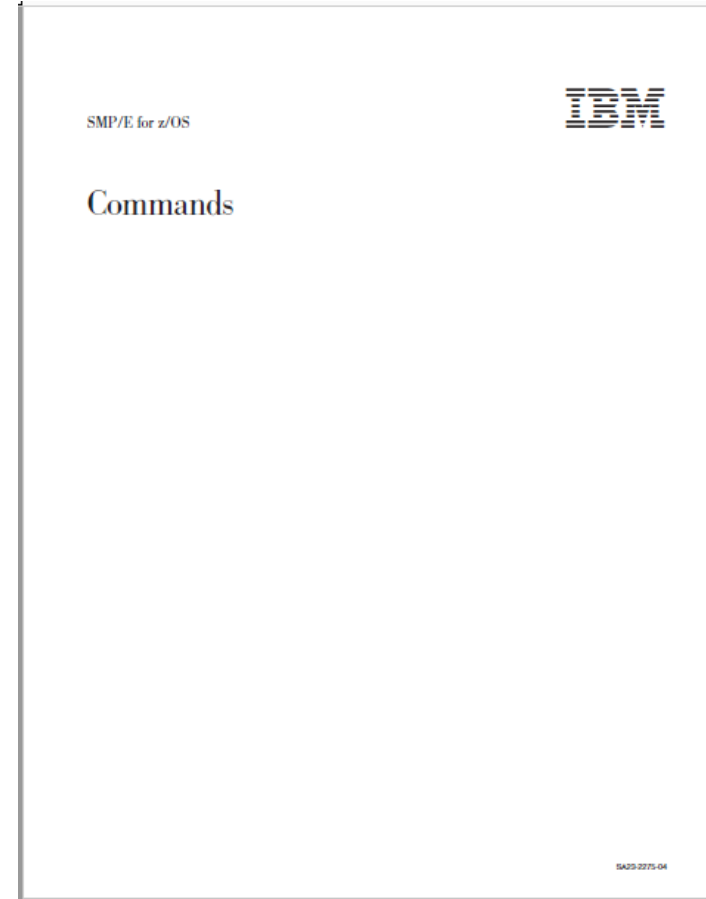
You Can Only Start From Where You Are*

- ServerPac is closest to what we want
- We must preserve its good attributes
- We did some things but have more to do to make it “the” installer for IBM products:
 - Remove the need to order a “base” product (z/OS, CICS, DB2, IMS, or WebSphere), which we have done
 - Get products off the “not separately available in ServerPac” list (in progress)
 - Make it possible for non-SMP/E products to be delivered in ServerPac, (in progress)
- Intended to let you order the product sets you want, when you want, for deployment into the environments you want



Then, There's SMP/E

- SMP/E needed a tweak
- When you have an existing product set in an existing SMP/E zone, and you don't want to replace all of it, but you have another installed product at hand...
- ZONEMERGE should be your friend!
- But ZONEMERGE didn't do everything it needed to do
- Improved ZONEMERGE support designed to allow one or more new compatible products to be added to an existing SMP/E zone is now available
- This addresses some of the SMP/E infrastructure we need



And, z/OSMF Software Management

- z/OSMF Software Management needed some work too...
- It required SMP/E packaging
 - Not all products were supported by Deployment
 - It could not be the installer for non-SMP/E products from IBM and other software vendors
 - Deployments did not accept external packages as input
 - It would not create portable versions of software instances, a prerequisite for the function above

The screenshot shows the 'Add Software Instance' form in the z/OSMF Software Management interface. The breadcrumb trail is 'Software Management > Software Instances > Add Software Instance'. The form title is 'Add Software Instance'. On the left, a navigation pane shows a tree structure with 'System and Global Zone' selected. The main content area is titled 'System and Global Zone' and contains the instruction 'Select the system and the global zone CSI associated with the product set.' There are two required fields: '* System:' with a dropdown menu showing 'C09' and a 'Select...' button; and '* Global Zone CSI (Learn more.):' with a dropdown menu showing 'Select or type' and a red 'X' icon.

Recent Software Management Functions

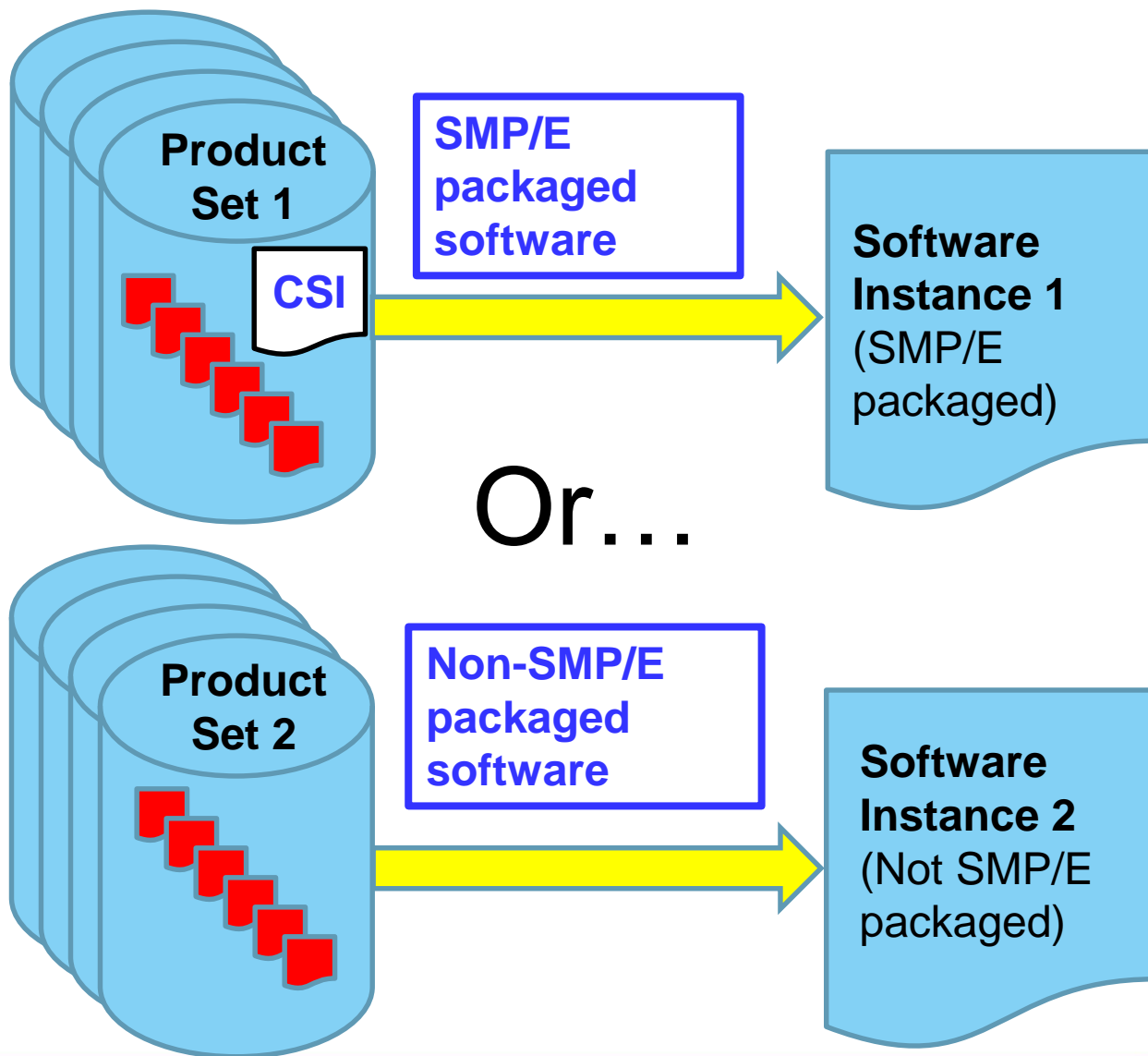
- SMP/E-agnostic deployment
 - Define Software Instances *with or without SMP/E zones*
 - Deploy a Software Instance *whether or not* it has SMP/E zones
 - A built-in, SMP/E-agnostic software packager
 - Define and Export a Software Instance with arbitrary content in a portable format, whether SMP/E-managed or not SMP/E-managed
 - A built-in portable format installer
 - Perform a Deployment operation using an exported Software Instance as input, which gives us a built-in, SMP/E-agnostic installer
- **This also provides a basis for a common installer, for anyone who wants to play along**
- *Note: Available on z/OS V2.2 with PTFs (with rollback to z/OSMF V2.1)*



Big Animal Pictures (BAPs)



Define a Software Instance Today

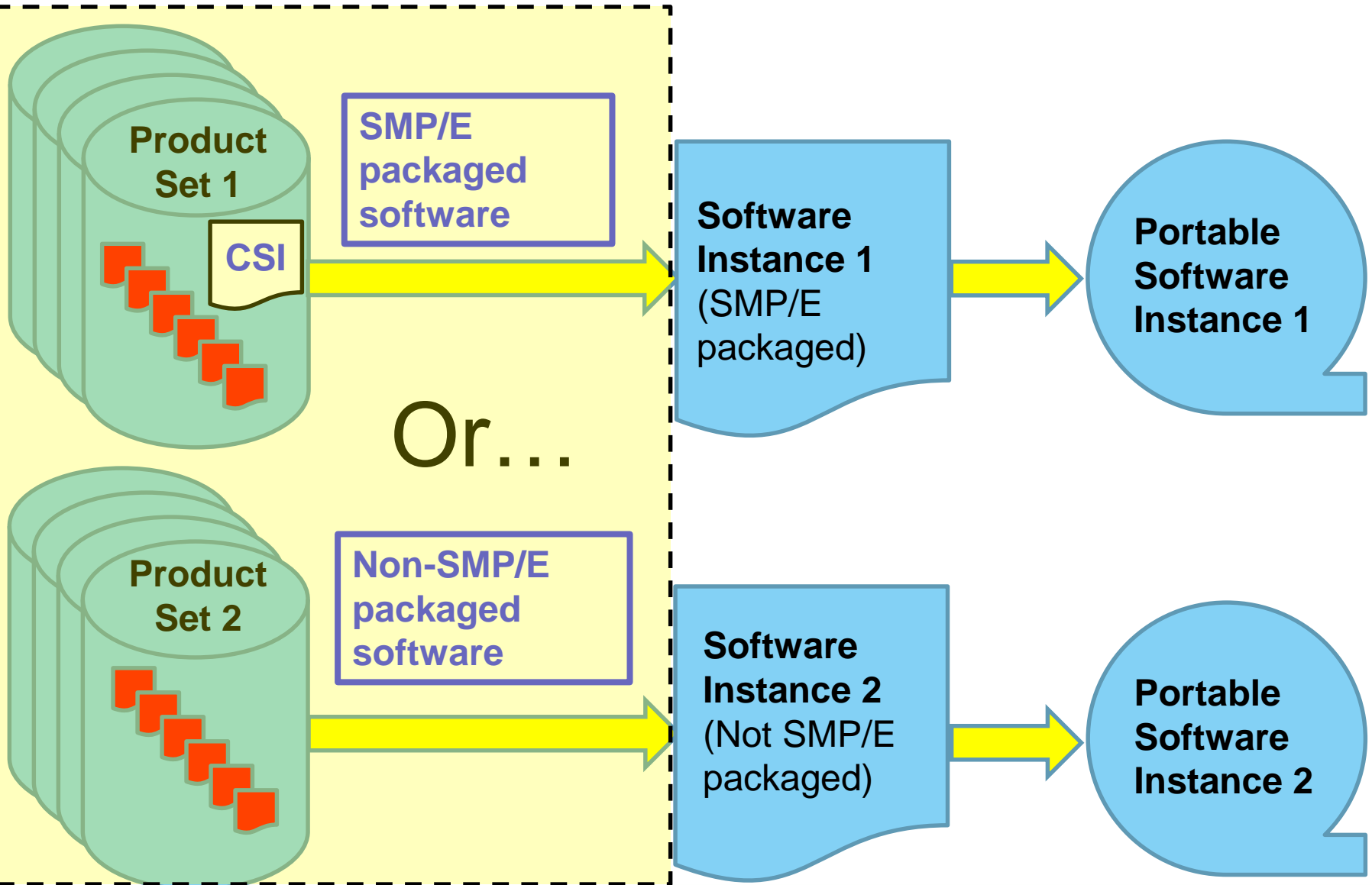


Note: These are just examples.

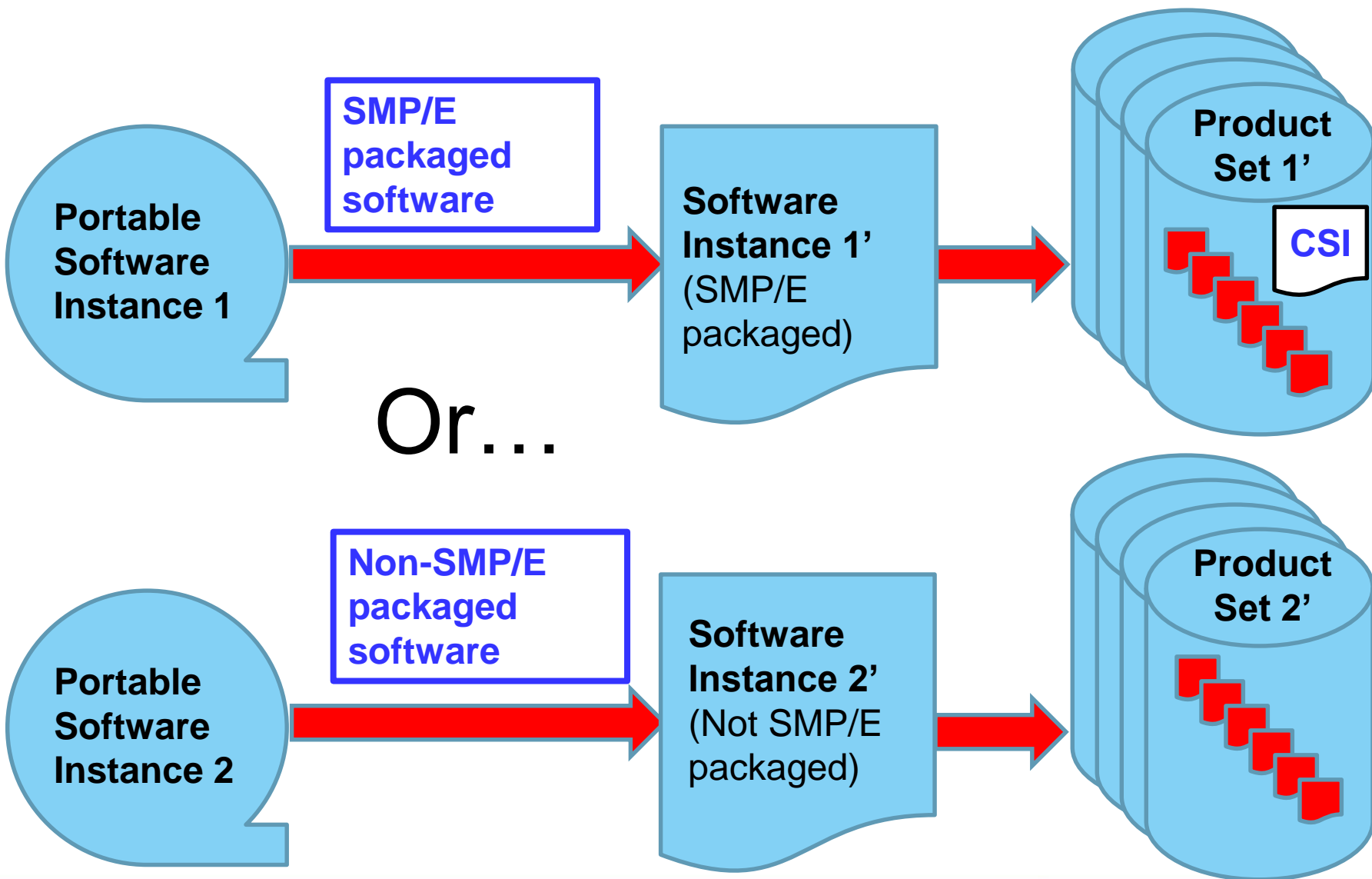
SMP/E vs. non-SMP/E is **not** an either/or choice.

You can define mixed software instances with both SMP/E and non-SMP/E elements.

Export a Software Instance



Deploy From a Portable Software Instance



And, Elsewhere...*

- There are ~~25~~ 22 products left that are not separately available in ServerPac
- 8 are fonts; we plan to add them to the Font collection element in z/OS V2.3 and withdraw the separate font products*
- ...leaving 14 to go.

Note: Shopz shows a higher number because it lists many products more than once

Product ServerPac Eligibility

▲	Product is eligible for Product ServerPac
△	Product is not eligible for Product ServerPac

From Shopz Product legend page

- My goal is to have “all” products separately available in ServerPac by YE2019*
- Why “2019”...? Hold that thought...

For 2016, Product ServerPac orders were ~37% of all ServerPac orders

Software Manufacturing and Shopz

- 2017-2018 Plans*

- Once we can flow non-SMP/E packaged products through ServerPac production...
- ...we can start transferring products from the Standalone ordering path into ServerPac
- As products move into ServerPac, they will fall off the “Standalone products and fixes” lists
- When the Standalone products and fixes list is empty, it, too will evaporate

~~Catalog view (Products in this view: 68)~~

~~Country/Region~~

~~United States~~

~~Package type~~

~~z/OS - Standalone products and fixes~~

~~Group~~

~~z/OS - All (68 Products)~~

Standalone path
screen capture
taken on
22 February 2017;
down to 35
products on 1
August 2017!



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z/OSMF Software Management

- 2017-2018 Plans for z/OSMF Software Management*
 - To better support non-SMP/E packaged products we need to add product information for them to Software Management so we can have:
 - Product content displays for non-SMP/E products that are included in Software Instances
 - End-of-service reporting for these products
 - We need support for downloading portable software instances, in Software Management
 - We need to call workflows from deployment operations

The things above are infrastructure in this timeframe...



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So...What's Left?

- Past 2018*
 - We have so far put the needed functions on a z/OS V2.2 base with PTFs, though some functions also went back to z/OS V2.1
 - z/OS V2.2 is the first release in which z/OSMF is a base element of z/OS, and **therefore z/OS V2.2 is the “base” for our strategy**
 - IBM can begin to transition to z/OSMF Software Management as the installer **once z/OS V2.2 is the lowest level driving system** for installing a new z/OS release
 - That would follow z/OS V2.1’s projected end of service in 4Q2018
- 2019+*
 - SMP/E PTF installation and acquisition in Software Management
 - Software instance merge (including ZONEMERGE) in Software Management
 - Possibly SMP/E and Software Management support for software instance merge-with-replace
 - We’ll wait to see whether we really need this (I’m sure you will help us with that!)

Let's Step Back and Summarize

- We have now or intend to have*:
 - An **SMP/E-agnostic installer** built into z/OSMF Software Management
 - The **ability to merge products** into existing SMP/E zones
 - The **ability to drive workflows** from the installer (which in turn can drive other workflows)
 - “Everything” in **ServerPac**, whether SMP/E-packaged or not
 - “Everything” available separately in **ServerPac**, too
 - **Full content and end-of-service display support** for non-SMP/E-packaged products
 - **Package acquisition** function in z/OSMF Software Management
 - **Software instance merge** (including ZONEMERGE) support in z/OSMF Software Management
 - **SMP/E service installation** support in Software Management

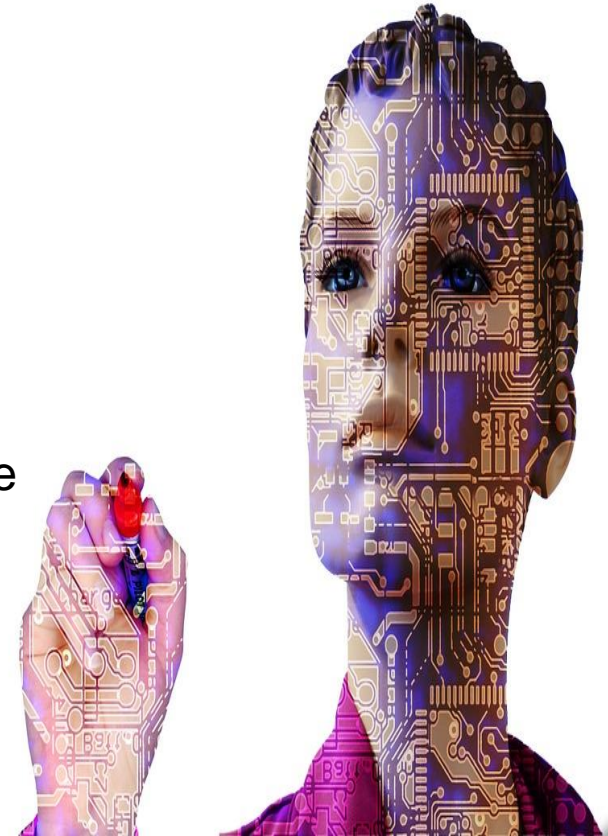
So, what else is left?



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ServerPac Transition Directions*

- We want to convert existing generated jobs for product setup (aka “RIMs,” or Related Installation Materials”) to z/OSMF workflows
- We want to begin to create ServerPacs in z/OSMF Software Management Portable Software Instance format
 - Note: If I get my way, there will be a transition period during which both ServerPac formats will be available—but it will not be excessively long
- A bit later, we want to withdraw the old (today’s existing) format
- The soonest we can realistically do this is early 2020



And, Finally...

- It will be time to let go of CBPDO around this time*
- When it was introduced in the 1980's it was a **big** step forward
- CBPDO got everything in “one box” for the first time!
 - Really more like a pallet than a “box,” if you ordered an entire operating system back then, but at least it was in one order
- Today, it's the “hard way” to manage system software, and it's had no significant investment in a long time





What About Other Software Vendors?

Software Vendor Involvement

- For years, we have used the portmanteau word “coopetition” to mean we cooperate in some ways while competing
- That said, this experience has been unique in my IBM career
- The level of cooperation has been breathtaking!
- We kept the other vendors in mind as we put things into the planned functions for this strategy, because:
 - We all have the same essential needs
 - We all need the same sorts of tooling
 - We will all be doing parts of this for the first time, so making the tools common helps because we can all choose to share experiences
 - Most importantly, we all need to address this platform-level issue
 - “The rising tide lifts all boats” - JFK

We have all been working through this together.



The Software Vendors' Initial Comments*!

- “We want a modern installer that is part of z/OS”
- “We want support in the installer for **both** SMP/E-packaged products **and** non-SMP/E-managed products”
- “We want support for directing tasks to the right people by role”
- And, some other requirements I’ll get to later...
- These discussions are on-going...



* Paraphrased

Cross-Vendor Meetings

- We met in person at the August 2015 SHARE
 - Hosted by Marist College (thank you, Harry Williams)
 - That large room was pretty full!
- We have met in person at every subsequent SHARE
 - These sessions also hosted by Marist
- We have weekly meetings by phone
 - Hosted by BMC (thank you, Paul Spicer & Becky Parchman)
 - I count 32 companies on Paul's distribution list
 - Attendance has been quite good; from the web conference on 10 February's call:



Common Vendor Install Project (27 Participants)

Vendors' "Priority 1 Bunch" Requirements

1. A batch API example for creating an exported Software Instance
 - ✓ **Available**
2. Support for downloading products
 - **Planned for 2017***
3. Workflow editor (for product development)
 - ✓ **Available**
4. Package workflow generation API (for package creation)
 - TBD*
5. Support in Software Management to call a package-level workflow from any deployment operation (including one for a portable software instance)
 - **Planned for 2018***
6. A defined set of attributes for data sets in a file, with an architected way to find the file (Link List, LPA List, APF List, Contiguous, Master Catalog, etc.)
 - TBD*

Priority 2 “Bunch” Requirements

1. Software Management support for product orders (download)
 - **Planned for 2017***
2. Support for downloading SMP/E PTFs in Software Management
 - TBD*
3. Software Management support for installing corrective and preventive service, using SMP/E (at least)
 - TBD*
4. Package definition file attributes (e.g., vendor name)
 - TBD*
5. Vendor definition files
 - TBD*

Priority 2 Requirements, Continued

6. Software instance merge (including ZONEMERGE) in Software Management
 - TBD*
7. Common acquisition process for downloading software:
 - **Planned for 3Q2017**
8. Common acquisition process for downloading SMP/E service:
 - ✓ **Available** (RECEIVE ORDER interface to be published, now available to vendors on request)

Older Requirements from Software Vendors

- A way to programmatically add, change, and delete software instances in z/OSMF Software Management

✓ **Available**

- A way to programmatically export a software instance

✓ **Available**

- An SMP/E-agnostic installer, built into z/OS

✓ **Available**

More Information

Shameless Plug!

The *very next session* in this room (after lunch) is:

IBM's New z/OS Installation Strategy: Update from the Vendors

Session 21587

Speakers:

Sam Knutson (Compuware) - Moderator

Dawn Damore (CA Technologies)

Keith Sisson (Compuware)

Paul Spicer (BMC)

John Eells (IBM)

Even More Information

Shameless Plug #2!

Want to talk to us all? We're here to talk to!

Roundtable: Discussion on IBM's new Installation Strategy with IBM and Vendors

Session 21619, Room 554A/B

Speakers:

Dawn Damore (CA Technologies)

Sam Knutson (Compuware)

Keith Sisson (Compuware)

Paul Spicer (BMC)

John Eells (IBM)



Some Other Points

What We Intend*

We want to make the installation path simpler

- Use a modern browser-based installer, part of z/OS
- Use workflow infrastructure support for setup and configuration tasks
- One way to order and install across the IBM product set
- Same process supported for initial installation and deployments across your systems
- Support for all software, SMP/E and non-SMP/E
- Some accommodation for existing processes where possible
- Consistency with other vendors who choose to implement

This is where IBM wants to invest.



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What We Do Not Intend*

We will do nothing to make the harder paths any easier

- Some of them might become slightly harder
- For example:
 - If you absolutely insist on doing the SMP/E work yourself:
 - You will have to run ACCEPT/BUILDMCS to create installable products from a portable software instance once CBPDO is gone
 - Then, run RECEIVE/APPLY/ACCEPT as usual
 - Good news:
 - BUILDMCS is fast!
 - The service is integrated, so there is less PTF installation to worry about
 - Extra steps, but the overall effort is probably approximately the same compared to using CBPDO for many IBM products—more effort for some, less for others

What We Do Not Intend*

- Another example:
 - If, contrary to our recommendations, you absolutely insist on migrating SMP/E-installed software without the SMP/E CSIs:
 - Within Software Management, you will have to define a software instance without the CSI data sets, then deploy it
 - Outside Software Management, you can of course “do what you’ve always done”
 - But, keep in mind that you will lose (or fail to gain):
 - End of service date tracking capabilities for deployed SMP/E-packaged software
 - HOLDDATA comparisons
 - Service displays: “Where do I (not) have this PTF”?
 - MISSINGFIX reports
 - Other functions we base or might base on CSI availability

The Future of SMP/E*

We *absolutely do not* intend to discontinue the use of SMP/E for packaging IBM products!

- If we ever wanted to, we would need something a lot like it
- Many IBM products require SMP/E packaging, such as those having:
 - Close component and product interdependencies
 - “Quark-level” (vs. file replacement) service capabilities
- But, some products do not need SMP/E; for example:
 - Those with very limited or no inter-product dependencies
 - Products whose service strategy is “replace all the code in the product in every PTF”
 - Products that use different service tools
- Expect to see more products from IBM in non-SMP/E format, and a few of them changed from SMP/E to non-SMP/E, when appropriate

Still More Information!

Shameless Plug #3!

Thursday 11:15

LAB: z/OS Installation Strategy

Session 21509, Room 210C

Speakers: Marna Walle, John Eells

And (same time, same place):

Lab: z/OSMF - Choose Your Own Topic (Session 20132)

Session 21508, Room 210C

Speakers: Marna Walle, Zhi Li



Final Thoughts

IBM's View (Well, mine, at least)*:

- The required set of function is currently intended for the z/OS V2.2 base via SPEs as it rolls out; **“nothing else to buy”***
- However, as they say, “life is what happens when you’re making plans,” so we will see how much we can actually cram into this timeframe
- **We only win if you win**, too.
 - Vendors and customers, we really want everyone to play!
- Please **make sure we understand** your requirements...we will need your help to:
 - Make this “so easy, a caveman can do it”
 - Define things that should be common for a common look and feel
- We would also be **happy to have your help** with:
 - Prioritization and rollout (**SHARE can help here**)
 - Discrete things we have not yet built, but need to build
 - Things we have not thought of yet

Summary*

- **GUI-based installer for ServerPac**
 - Part of z/OSMF Software Management
 - ServerPac will look markedly different
 - Support for SMP/E-packaged, non-SMP/E-packaged, and both kinds of products in the same package
- **ServerPac will be the way IBM products are delivered** on the platform
 - The installer will work and play well with z/OSMF workflows
- **z/OSMF Software Management:**
 - Will help with installing SMP/E-based service
- **All vendors can leverage these built-in functions** to play if they choose:
 - Software Management APIs
 - Export and Import capabilities in Software Management
 - Workflows
- **Other futures:**
 - Simplify HOLDDATA management
 - Incremental RESTORE
 - EAV support in Software Management
 - ...

Functional Summary - Available!

What	When
Software Instance Create API (includes list, create, read, update, delete support)	Available (z/OSMF V2.1 with a PTF, quite a while back)
Improved ZONEMERGE	Available with PTF UO01809
<ul style="list-style-type: none"> • Non-SMP/E Software Instances • Export a software instance • Use a portable format as input for Deployment 	<ul style="list-style-type: none"> • Available on z/OS V2.2 with PTF for PI66832 • Available 4Q16 for z/OSMF V2.1 with the PTF for APAR PI67819
Common acquisition process for downloading SMP/E packaged PTFs	Available 4Q16 , by publishing RECEIVE ORDER interface
Product and Feature information for non-SMP/E products	Available June 2017 on z/OS V2.2 and z/OSMF V2.1 with APAR PI79666
Software Instance Export REST API	Available 4Q16 with APAR PI72283

* All statements regarding IBM future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

Functional Summary, 2017-2018 plans*

What	When
Portable software instance acquisition (likely based on GIMGTPKG)	Planned for 4Q2017
ServerPac manufacturing support for non-SMP/E products	Planned for 3Q2017
Transfer of products from the standalone path to ServerPac	Planned for 1Q2018
Deployment Workflows (software instance-level workflow)	TBD; current plan is YE2018

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Functional Summary, the Next Wave*

What	When
Vendor Information Files for vendor-specific data (vendor name, pertinent URLs, etc.)	Under evaluation now
Support for calling workflows from Deployment	Under evaluation now
Managing SMP/E-packaged PTFs	Under evaluation now
Data Set Attributes support (things such as LPA required, APF required, is an ISPF panel data set, etc.)	Under evaluation now
Software Instance Merge (including, where applicable ZONEMERGE)	Under evaluation now

Note: Not listed in any particular order.

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